This book will be a most useful guide not only for every biologist interested in the gene and its changes but also for the research worker in this field.

H. G. HILL.

Verschuer, Prof. Dr. Otmar v. *Erbpathologie. Ein Lehrbuch fur Aerzte und Medizinstudierende.* 2nd edition. Dresden and Leipzig, 1937. Theodor Steinkopff. Pp. viii+244; 35 figures. Price in paper cover, R.M.8; cloth R.M.9.20.

PROFESSOR V. VERSCHUER, one of the leading human geneticists in Germany, has produced a really good text-book of the inherited pathological conditions for the medical student and the practising doctor.

The book begins by outlining the duties of the "Erbarzt" in the Nazi State, with an historical introduction and a survey of the tasks of the science of human inheritance (12 pp.). Then follows the general theory so far as it concerns Man, such as Mendelism, mutation, the phenotypical manifestation of genes, constitution, lethals, inbreeding, race mixture and race pathology (73 pp.), chapters on hereditary diseases (73 pp.); and finally the application to medicine, including suggestions for the training of students in human genetics and eugenics (39 pp.). There are also twenty-seven pages of references giving access to the original literature. The very fact that the book is in its second edition only three years after the first, testifies to its good qualities, and only a few lapses, that could easily be corrected in the next edition, have been noted by the reviewer: i.e. Man's sex-chromosomes in the male sex are *XY*, not *XO* (p. 20); in the white-eye series of Drosophila the compounds are intermediate, the darker allelomorph, except the normal allelomorph, does not dominate over the lighter (p. 29).

The table (p. 178) setting out the reasons for eugenic sterilizations in Germany in 1934 may be of interest to the readers of this REVIEW:

Hereditary Disease	6,052 Men (K. H. Bauer) per cent.	6,032 Women (v. Mikulicz-Radecki) per cent.	325 Men and Women (v. Verschuer) per cent.
Congenital feeble-mindedness	42·9	66·8	29·6
Schizophrenia ...	25·4	22·6	34·4
Manic-depressive insanity	1·6	0·5	2·8
Hereditary epilepsy	13·4	8·1	24·6
Huntington's chorea	0·2	1·5	0·3
Hereditary blindness	1·2	1·5	—
Hereditary deafness	1·4	1·5	0·6
Serious hereditary bodily malformation ...	0·2	1·5	0·9
Serious alcoholism	5·0	0·5	6·8
Diagnosis not given	8·7	—	—

This list concerns only a few clinics, no official complete record being so far available. It is remarkable that only a small fraction of the cases have been sterilized for purely physical abnormalities. H. G. HILL.

Sjögren, Torsten, M.D. *Investigations of the Heredity of Psychoses and Mental Deficiency in Two North Swedish Parishes.* From *Annals of Eugenics*, Vol. VI, Part III, December 1935. Pp. 253-318, 26 tables and 3 pedigree charts. (This paper occupies an entire number of the *Annals of Eugenics*. Price 15s.)

THIS notable contribution by the distinguished Swedish writer on psychiatry and genetics will be welcomed with enthusiasm, and for more than one reason. Not only does it present the results of an important research, but it is yet another illustration that in the Galton Laboratory there exists an organisation that publishes original records *in extenso* and so makes them available for all future workers on human genetics. It would be impossible to overstate the necessity for this course if the subject is to make substantial and rapid advances. With this activity of the Galton Laboratory the *Eugenics Society* is now associated.

Dr. Sjögren has continued his well-known researches by making a most detailed survey of two isolated Swedish parishes that provide an ideal community for a genetical research. Once again one can only feel envious of the detailed records made possible by enlightened Swedish administration. From 1900 onwards the state of the population in each parish is given year by year, distinguishing between immigrants for other parts of Sweden, from abroad and with other necessary details. Since 1902 registration of mental defectives and insane persons has been compulsory and provides an admirable basis for work of this kind. It would be too much to expect, of course, that registration would prove to be quite complete, and it has had to be supplemented by the author's personal investigations. As regards deficiency, 120 cases were ascertained in the two parishes, giving an incidence of 14 per 1,000. Of these, 85 per cent. were low-grade, and the great majority fell into the class of non-specific low-grade defectives previously investigated by Dr. Sjögren. Undoubtedly, in such a population, there is every chance of securing a group of defectives of relatively high genetic uniformity. There can be little doubt that the condition is hereditary in nearly all the cases and that inheritance is of a recessive type. Although the incidence of consanguinous marriages is high in this population, it is much higher amongst the parents of defectives. The proportion of affected children is lower than the Mendelian 25 per cent. (It is about 11 per cent.) There is also a significant excess of males. The author advances the hypothesis that the condition is due to a rare autosomal gene, or genes, with a complementary and commoner sex-linked recessive gene.

The psychotic cases numbered 106, and the estimated frequency was about 7 per 1,000. There were 44 cases of schizophrenia, 20 manic depressives, 13 senile or pre-senile cases, 2 criminal cases with psychotic traits, 5 epileptics and 22 were unclassified. As in other researches, it was found that a relatively high proportion of the sibs of schizophrenics were similarly affected, and a still higher proportion if a parent was also affected. The incidence amongst sibs was much lower in the case of the manic depressives.

The material has been set out in the greatest detail. Numerous tables present all the data that any future worker would be likely to require. Individual notes are given on all the mentally defective and psychotic persons. In many cases these persons were still available and notes are given of the results of personal examination. Mental ages are given in many instances. The genealogical records are especially complete. A series of enormous pedigree charts are presented, a single family complex including the majority of the mental defectives and many of the psychotics.

The conclusions and deductions of an author about his material may be of great importance, as indeed they are in this case, but to make available the full record in all necessary detail increases the value of such a research to an extent not easily expressed. Many years ago, the late Professor Karl Pearson established a policy of full publication, notably in the "Treasury of Human Inheritance." No doubt there were many who considered his plan an extravagant one and who would perhaps have maintained that far more condensed accounts would have answered the questions that it then seemed possible to ask. But the wisdom of Professor Pearson has been amply justified, for the "Treasury of Human Inheritance" provides, and will continue to provide, for the research worker in human genetics, just that invaluable storehouse of information that the name of the series indicates. Theories can be tested, statistical techniques can be elaborated, and that in days, or even hours, instead of months, for, if an author can only set out a bare summary, sufficient for his immediate needs, it is certain that the next investigator will again have to face the immense task of searching through what is usually a vast literature. Or if, as in the present case, it is a record of a single original research, another worker, with a new hypothesis to test, would have to repeat all the work again, although the necessary data were contained in his predecessor's unpublished notes. Further, the data collected by a single

research worker may be insufficient for many purposes, but the pooled results of several workers may provide all the necessary material. It is highly satisfactory that the Galton Laboratory is continuing, and extending, Professor Pearson's far-sighted plan, and it will be a source of satisfaction to numbers of the *Eugenics Society* that their *Society* is associated with so important a work in the field of eugenics and human genetics.

J. A. FRASER ROBERTS.

Schottky, Johannes. *Die Persönlichkeit im Lichte de Erblehre.* Leibniz and Berlin. 1936. Taubner. Pp. 146.

THIS is a symposium by seven authors on personality and inheritance. It contains quite an interesting chapter by Hefter on the work of Galton, an informative article by Kloos on the inheritance of special gifts, and a somewhat superficial article by Stumpfl on the inheritance of psychopathic character traits. The article by Kloos is the most useful in the book. Its main weakness is that the data provided are largely anecdotal and unsuitable for scientific analysis. It contains, however, some very remarkable statements. Commenting on the absence of musical geniuses among the remoter descendants of Bach and Schumann, in spite of continued inbreeding, he remarks, " Nature is here obviously taking care that the trees don't grow into the heavens "—an implication of teleological views to " Nature " that cannot be accepted without further evidence. He states that an unduly high proportion of geniuses are first-born children—a finding that almost certainly rests on a well-known statistical error. Again, he states that mathematical talent is inherited exclusively from father to son, and is never transmitted by the female. This would require the extremely improbable hypothesis of inheritance by genic factors localised to the Y-chromosome, for which much more cogent evidence would be required. The remaining articles are of little interest. They are distinguished by a boring style and a long-winded manner of swamping a minimum of often irrelevant and almost always inconclusive data in a welter of empty discussion. The contributors appear almost completely ignorant of any literature published in any tongue but German. A valuable opportunity of extracting the voluminous literature and summarising the scanty facts has been missed. For this there is no compensation in the provision of any new material.

ELIOT SLATER.

Weitz, Prof. Dr. Wilhelm. *Die Vererbung innerer Krankheiten.* Stuttgart, 1936. Ferdinand Enke. Pp. 197, 67 pedigrees and 12 tables. Price: unbound R.M. 13; bound R.M. 14.60.

To meet the growing demand for genetical information among physicians and surgeons in Germany, the publishers have undertaken a series of small books on the relation of genetics to various branches of medicine. Two of these* have already been reviewed in this journal, others are to follow. In the present volume, Professor Weitz, whose first investigations of twins date back to 1924, reviews the field of internal diseases. The treatment, though necessarily short, is clear, and many original observations not published elsewhere add to its value. The book will be a useful guide to the practising doctor.

Many of the diseases dealt with are common, and environmental conditions in the widest sense (including infections) contribute largely to their development. Pedigrees alone will therefore sometimes be misleading since those concerning " interesting " families with many affected members are more likely to be published than isolated cases. The same applies to the isolated twin pairs now frequently published. It is therefore high time that large *unselected* series of twins were kept under observation over long periods. The endowment of a " Free Hospital for Twins " with at least one competent geneticist on the staff would be one of the greatest

* Lange, Max. *Erbbiologie der angeborenen Körperfehler.* EUGENICS REVIEW, Vol. XXVII, p. 236.

* Curtius, Friedrich. *Die organischen und funktionellen Erbkrankheiten des Nervensystems.* EUGENICS REVIEW, Vol. XXVIII, p. 129.